

ARIFOV, U.A.; BEGZHANOV, R.B.;

[Power resources present and future] Khozirgi zamon va
kelazhak energiasasi. Toshkent, Uzbekiston SSR Fanlar
akademiasining nashrieti, 1963. 135 p. [In Uzbek]
(MIRA 17:11)

STARODUBTSEV, S.V.; BEGZHANOV, R.B.; RAKOVITSKIY, S.I.

Multipole order of γ -transitions in Sn^{116} accompanying the
 β -decay of 54 min. $\text{In}^{116\text{m}}$. Izv. AN Uz.SSR. Ser. fiz.-mat.
nauk 7 no.5:40-44 '63. (MIRA 17:8)

1. Institut yadernoy fiziki AN UzSSR.

BEGZHANOV, R.B.; KAIPOV, D.K.; SHUBNYY, Yu.K.; ISLAMOV, A.A.

Lifetime of the 1.29 Mev. level in Sn^{116} . Izv. AN Uz.SSR. Ser.
fiz.-mat. nauk 7 no.5:45-50 '63. (MIRA 17:8)

1. Institut yadernoy fiziki AN UzSSR.

ACCESSION NO: AP3000219

S/0166/63/000/002/0044/0048

AUTHORS: Starodubtsev, S. V.; Begzhanov, R. B.; Rakovitskiy, S. L.

TITLE: Investigations of Hg¹⁹⁸ conversion electrons on beta-spectrometer with $\pi/2$ focusing

SOURCE: AN UzSSR. Izv. Seriya fiziko-matem, nauk, no. 2, 1963, 44-48

TOPIC TAGS: beta spectrometer, resolving power, transverse magnetic field, excitation level, conversion line, gamma radiation

ABSTRACT: The details of a beta-spectrometer BPP-3M with a double focusing system at $\pi/2$ focusing angles has been discussed. The authors claim it has a high resolving power with a transverse magnetic field range of 11.4 to 624 oersteds, capable of focusing electrons with 5.6 kev to 3.7 mev energies. The beta-spectrometer is used to study the β -decay of Au¹⁹⁸ to the first excitation level of Hg¹⁹⁸, which in turn decays to the ground state by emitting γ -radiation with 411.8 kev energy. The spectrometer is shown to record with good resolution the conversion lines L₁, M, and N-shells of Hg¹⁹⁸ generated by the gamma radiation. Comparing theoretical and experimental values, the transition energy of 411.8 kev in Hg¹⁹⁸ is found to have

Cord 1/2

ACCESSION NO: AP3000219

an electric quadrupole nature. Orig. art. has: 3 tables and 3 figures.

ASSOCIATION: Institut yadernoy fiziki, AN UzSSR (Institute of Nuclear Physics
AN UzSSR)

SUBMITTED: 06Feb63

DATE ACQ: 12Jun63

ENCL: 00

SUB CODE: PH

NO REF SOV: 005

OTHER: 012

Card 2/2

L 17128-63

ACCESSION NR: AP3000220

EWI(m)/BDS AFPTC/ASD

S/0166/63/000/002/0049/0055

55
54

AUTHORS: Begzhanov, R. B.; Islamov, A. A.; Kaipov, D. K.; Shubnyy, Yu. K.

TITLE: Determining the half-life of Fe^{56} nucleus

SOURCE: AN UzSSR. Izv. Seriya fiziko-matem. nauk, no. 2, 1963, 49-55

TOPIC TAGS: resonant scattering, half-life, decay, gaseous source

ABSTRACT: The method of resonant scattering was used to determine the half-life of the first excitation state of Fe^{56} at 0.845 MeV energy level. The compound MnC^{12}_2 was used as the gaseous source scatterer (with Mn^{56} half-life of 2.56 hrs).

To measure self-absorption with good accuracy the experiment was set up in both plane and curved scattering geometries. Compared to a solid Cu-scatterer an increase in count was obtained from the gaseous scatterer. This increase was 10-12% for the curved geometry and 18-20% for the plane case. Moreover, the plane geometry provided a better screening of nonresonant scattering in the energy range 0.785-0.955 MeV. The half-life thus determined was $(9.6 \pm 1.8) \cdot 10^{-12}$ seconds. Orig. art. has 5 figures, 2 formulas, and 2 tables.

ASSN: Institute of Nuclear Physics, Academy of Sciences, Uzbek SSR.

Card 1/2

4-1/116-63

Pr-4/Pu-4 WW

EPR/EPT(c)/EPT(n)-2/ENT(m)/BDS

APFTG/ASD/ESD-3/SSD

Ps-4/

ACCESSION NR: AP3005532

8/0166/63/000/003/0023/0028

AUTHORS: Bagshanov, R. B.; Gladyshev, D. A.; Starodubtsev, S. V.; Khaydarov, T.

TITLE: Investigation of slow neutron spectra 19

SOURCE: AN UzSSR. Izv. Ser. tekhn. nauk, no. 3, 1963, 23-28 77

TOPIC TAGS: slow neutron, chopper, reactor, pulsed neutron source

ABSTRACT: Experiments were conducted to determine the neutron energy spectrum of slow neutrons emerging from a horizontal channel of a water-moderated reactor.¹⁹ To determine neutron cross sections in the 10-KeV energy range a mechanical neutron velocity selector of 8.5 μ sec resolution was used with a pulsed neutron source of 1200 pulses per minute. The slow neutron energy spectrum obtained at various reactor loads and various channel widths (64 and 32 μ sec), gave a Maxwellian distribution in the wave length region 0.75 to 1.5 $\text{\AA}$. The effective neutron temperature was estimated at 375K with a moderator temperature of 308K. Orig. art. has: 4 formulas and 2 figures.

ASSOCIATION: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics Academy of Sciences, Uzbek SSR)

Card 1/2

L 11052-63

EFF(n)-2/EWT(m)/BDS--AFFTC/ASD/APWL/SSD--Pu-4--DM

ACCESSION NR: AP3001182

S/0089/63/014/005/0490/0491

65

AUTHOR: Begzhanov, R. B.; Gladyshev, D. A.; Starodubtsev, S. V.; Khaydarov, T.

TITLE: Slow neutron spectrum in horizontal channel of VVR-S reactor ¹⁹

SOURCE: Atomnaya energiya, v. 14, no. 5, 1963, 490-491

TOPIC TAGS: slow neutron spectrum, VVR-S reactor, Maxwell distribution

ABSTRACT: The neutron energy distribution in the VVR-S reactor ¹⁹ being used by the Institute for nuclear physics of the AN, UzSSR was measured. The mechanical interrupter of 150 mm diameter had 13 plane-parallel slits of 1 mm width. The flight path of neutrons to detector was 7.6 meters, being mostly in a 300 mm diameter vacuum tube. A 35 mm diameter boron counter served as the detector. A multi-channel, matrix-type time analyzer was used for recording. The width of the time channel could be varied from 1 to 128 microseconds. The dead time was 10 microseconds. Measurements of the neutron spectrum in a horizontal channel starting from the active zone of the reactor were made at 1200 rpm's and 32 to 64 microsecond channel width. The experimentally found distribution curve is given: energy of neutrons, in relative units, vs. wavelength up to about 4 angstroms. It follows the Maxwellian distribution only around the maximum between 0.75 to 1.5

Card 1/2

S/056/63/044/001/026/067
B104/B144

AUTHORS: Begzhanov, R. B., Islamov, A. A., Kaipov, D. K.,
Shubnyy, Yu. K.

TITLE: Lifetime of the 0.845 Mev level of the Fe^{56} nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,
no. 1, 1963, 137-141

TEXT: Resonance scattering of γ -quanta on the 0.845 Mev level of Fe^{56} is investigated using a ring and a plane scatterer and a self-absorption method with a gaseous MnCl_2 source ($T_{1/2}$ of Mn^{56} being 2.56 hrs). To determine the lifetime the mean cross section of resonance scattering was measured, and the energy distribution of the γ -quanta emitted was calculated theoretically. The annular Fe scatterer was of 37.5 cm in diameter, 13.5 cm high and 0.9 cm thick. The plane scatterer was a plate (30-30-1 cm), the mean scattering angle was 104° . The plane scatterer gave better screening of the source than the ring scatterer, and this considerably reduced the non-resonance scattering in the energy range of 0.785-0.955 Mev. To reduce the effect of Compton quanta, the

Card 1/2

Lifetime of the 0.845 Mev level ...

S/056/63/044/001/026/067
B104/B144

crystals were surrounded by a filter (3.5 mm Pb + 1 mm Cd). The $Mn^{56}Cl_2$ source was produced by several hours' irradiation of 2 mg $Mn^{55}Cl_2$ in the reactor of IYaF AN UzSSR with a neutron flux of $1.8 \cdot 10^{13} \text{ cm}^{-2} \cdot \text{sec}^{-1}$. A lifetime of $(9.6 \pm 1.8) \cdot 10^{-12} \text{ sec}$ is obtained for the first excited level of the Fe^{56} nucleus. This is 1/15 of the value determined by the Weisskopf single-particle model. There are 5 figures and 2 tables.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR (Institute of Nuclear Physics of the Academy of Sciences Uzbekskaya SSR); Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics of the Academy of Sciences Kazakhskaya SSR)

SUBMITTED: August 19, 1962 (initially)
September 26, 1962 (after revision)

Card 2/2

ACCESSION NR: AP4002542

S/0166/63/000/005/0040/0044

AUTHORS: Starodubtsov, S. V.; Begzhanov, R. B.; Rakovitskiy, S. L.

TITLE: Multipolarity of gamma transitions in Sn^{116} accompanying beta decay of 54 min. $\text{In}^{116\text{m}}$

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matem. nauk, no. 5, 1963, 40-44

TOPIC TAGS: tin 116, indium 116m, gamma transition, beta decay gamma emission

ABSTRACT: The internal conversion of high energy γ - transitions in Sn^{116} accompanying beta decay of 54 min $\text{In}^{116\text{m}}$ have been studied, correcting and extending previous investigations. Measurements were made on the β - spectrometer with double focusing at $\pi/2$ angle with a resolution, determined by K-line γ -radiation at 411.8 keV Hg^{198} , equal to 0.2%. The source used was indium oxide on aluminum foil, 1/mg /cm² in thickness applied to low intensity γ -transitions in the hard band. The results allow one to determine the angular momentum and the parity of high excitation levels, in Sn^{116} , obtained from the β -decay 54 min $\text{In}^{116\text{m}}$. For the 2807 keV level the most probable magnitude was $I = 4$ and $\pi = +$ which confirms the measurements of γ -transition angular correlations of 1510 MeV and 1296 MeV. Orig. art. has: 3 figures, 2 tables, and 1 formula.

Association: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics AN UzSSR)

Card

L 13624-63 EWT(m)/EDS AFETC/ASD
ACCESSION NR: AP3003102

8/0056/63/044/006/1811/1817

AUTHOR: Kaipov, D. K.; Begzhanov, R. B.; Kuz'minov, A. V.; Shubny'y, Yu. K.

TITLE: Resonance scattering of Gamma quanta on Cu-65 and Ti-46

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 1811-1817

TOPIC TAGS: excited state lifetime, nuclear resonance scattering, copper-65, titanium-46

ABSTRACT: The lifetimes of the excited states of Cu-65 and Ti-46 nuclei, at 1.114 and 0.890 MeV, respectively, were measured by nuclear resonance scattering, using gaseous sources of Ni-65 and Sc-46 in NiCl sub 2 and ScCl sub 3. The NiCl sub 2 was prepared from nickel enriched to 77.8% Ni-69 and irradiated in a neutron flux of 1.8 times 10 sup 13 per sq. cm. sec in the reactor of the Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics, AN UzSSSR).

The Ni-65 and Sc-46 activities were approximately 20 millicurie. The scattered photons were detected with a NaI(Tl) crystal combined with a photomultiplier. The energy distributions of the photons were calculated from the Ni-65 and Sc-46 decay schemes, assuming that the recoil nucleus is free and that there are no Beta-Gamma correlations. The lifetimes were found to be (1.42 plus or minus 0.20)
Card 1/2

L 13624-63

ACCESSION NR: AP3003102

times 10 sup - 11 sec for the 0.890-MeV level of Ti-46 and (6.5 plus or minus 1.6) times 10 sup - 13 sec for the 1.114 MeV level of Cu-65. The latter corresponds to an excited-nucleus lifetime of 8.3 times 10 sup -13 sec for the M1 transition and to an E2/M1 intensity ratio equal to 0.32. "The authors wish to thank A. A. Islamov for assistance with the measurements." Orig. art. has: 7 formulas, 2 figures, and 2 tables.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Nuclear Physics Institute, Academy of Sciences, Kazakh SSR)

SUBMITTED: 08Jan63

DATE ACQ: 23Jul63

ENCL: 00

SUB CODN: 00

NO REF SOV: 003

OTHER: 016

2/2

Card

L 19648-63

ENT(m)/EDS AFFTC/ASD

ACCESSION NR: AP3007059

S/0056/63/045/003/0443/0447

AUTHORS: Kaipov, D. K.; Shubnyy, Yu. K.; Kosyak, Yu. G.; Begzhanov, R. B.

19
TITLE: Resonance scattering of gamma rays from liquid and solid sources on Sn-116 and Cu-65 nuclei

SOURCE: Zh. eksper. i teoret. fiziki, v. 45, no. 3, 1963, 443-447

TOPIC TAGS: gamma ray, resonance scattering, liquid source, solid source, Ir-116, Ni-65, Sn-116, Cu-65

ABSTRACT: The reduction in the resonance scattering of 1.29 and 1.14 MeV gamma quanta by Sn¹¹⁶ and Cu⁶⁵ nuclei was found to be 0.055 and 0.040 when liquid sources of In^{116m} and Ni⁶⁵ are used and 0.050 and 0.024 when solid sources are used. The study of the attenuation effect in liquid and solid sources, as distinguished from the gaseous sources hitherto used, can lead to conclusions about the mole-

Card 1/4

L 19648-63

ACCESSION NR: AP3007059

2

cular interactions in the source material and can also yield the lifetimes of the high-lying excited states. Various models for the interaction of the recoil nuclei with the surrounding atoms of the source material are discussed. The results obtained for Sn-116 and Cu-65 are found to agree with data from other work. Orig. art. has 3 figures, 5 formulas, and 1 table.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Nuc. Phys. Inst. Acad. Sci. Kazakh SSR); Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR (Nuc. Phys. Inst. Acad. Sci. Uzbek SSR)

SUBMITTED: 15Mar63

DATE ACQ: 08Oct63

ENCL: 02

SUB CODE: PH

NO REF SOV: 002

OTHER: 006

Card 2/4

STARODUBTSEV, S.V.; BEGZHANOV, R.B.; RAKOVITSKIY, S.L.

Nature of highly excited levels in W^{182} . Zhur. eksp. i teor.
fiz. 45 no.4:921-926 0 '63. (MIRA 16:11)

1. Institut yadernoy fiziki AN Uzbekskoy SSR.

BEGZHANOV, R. B.; RAKOVITSKIY, S. L.

"Electric Quadrupole Transitions from the Level 3+ of Even-Even Nuclei."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22
Feb 64.

ITaF AN UzSSR (Inst Nuclear Physics, AS UzSSR)

AP4010295

S/0048/64/C28/001/0076/0079

AUTHOR: Starodubtsev, S.V.; Begzhanov, R.B.; Rakovitskiy, S.L.

TITLE: Concerning the high energy transitions in the decay of 54 min $\text{In}^{116\text{m}}$ to Sn^{116} /Report, Thirteenth Annual Conference on Nuclear Spectroscopy held in Kiev, 25 Jan to 2 Feb 1963/

SOURCE: AN SSSR. Izvestiya, Seriya fizicheskaya, v.28, no.1, 1964, 76-79

TOPIC TAGS: γ -transition, conversion electron spectrum, indium-116m, indium isomer, multipole order, decay scheme.

ABSTRACT: Although the decay of the 54 min isomer of In^{116} has been investigated by several authors the available information on the γ -transitions departing from the high-lying levels in Sn^{116} is still scanty. The characteristics of these γ -transitions are of interest not only per se but also in connection with the theoretical investigations of L.S.Kisslinger (Mat.-fys.medd.danske vid.selskab., 32, 9, 1960). In the present work there were measured the internal conversion coefficients of the high-energy γ -transitions in Sn^{116} with a view to obtaining information on these levels and amplifying the results of P.G.Hansen (Nucl.Phys., 30, 140, 1962) and

Cord 1/12

AP4010295

R.K.Girgis (Physica, 25, 590, 1959). The measurements were carried out on a $\pi/2$ double focusing β -spectrometer with a resolution of 0.25%. The source was in the form of indium oxide deposited on an aluminum foil. For investigating the low intensity γ -transitions in the high-energy region there was prepared a special source with a thickness of 1 mg/cm². Irradiation in a neutron flux of 1.8×10^{13} cm⁻² sec⁻¹ for one hour yielded an activity of ~ 75 mC. The measurements were started within a few minutes after irradiation. Since in view of the short lifetime of In^{116m} it is impossible to measure more than two lines using one source, the lines were measured in pairs, each line being repeated in each successive pair. There were detected γ -rays with energies of 1100, 1296, 1511, 1760 and 2121 keV. The multipole order assignments for the 1100, 1296, 1511 and 2121 keV transitions are all E2. The 1760 keV transition may be either M2 or a mixture of E2 + M3. The decay scheme for 54 min In^{116m} proposed on the basis of the data in the literature and the results of the present investigation is shown in Fig.1 of the Enclosure. Orig.art.has; 1 formula, 3 figures and 1 table.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk UzSSR (Inst. of Nuclear Physics Academy of Sciences, Uzbek SSR)

SUBMITTED: 00

DATE ACQ: 10Feb64

ENCL: 01

SUB CODE: NS
Card 2/17

NR REF SOV: 001

OTHER: 007

ACCESSION NR: AP4041452

S/0089/64/016/006/0523/0524

AUTHORS: Begzhanov, R. B.; Gladyshev, D. A.; Starodubtsev, S. V.;
Khaydarov, T.

TITLE: Cross section for the interaction between neutrons and Sm-149
and In-115 nuclei

SOURCE: Atomnaya energiya, v. 16, no. 6, 1964, 523-524

TOPIC TAGS: neutron interaction, neutron spectroscopy, indium,
samarium, resonance scattering

ABSTRACT: The total effective cross sections were measured with the
neutron spectroscope previously described (Atomnaya energiya v. 14,
no. 5, 1963, Izv. AN UzSSR. Ser. fiz. matem., nauk, no. 3, 1963)
at a channel width of 8 μ sec and resolution 2.23 and 2.5 μ sec/m in
the case of indium and samarium, respectively. The resonance para-
meters were calculated by a method described by G. I. Marchuk

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ACCESSION NR: AP4041452

(Teoriya i metody* rascheta yaderny'kh reaktorov [Theory and Design Methods of Nuclear Reactors], Gosatomizdat, 1962, p. 240). Some factors affecting the accuracy of the results are mentioned. Orig. art. has: 2 figures, 3 formulas, and 1 table.

ASSOCIATION: None

SUBMITTED: 19Sep63

NR REF SOV: 004

ENCL: 02

SUB CODE: NP

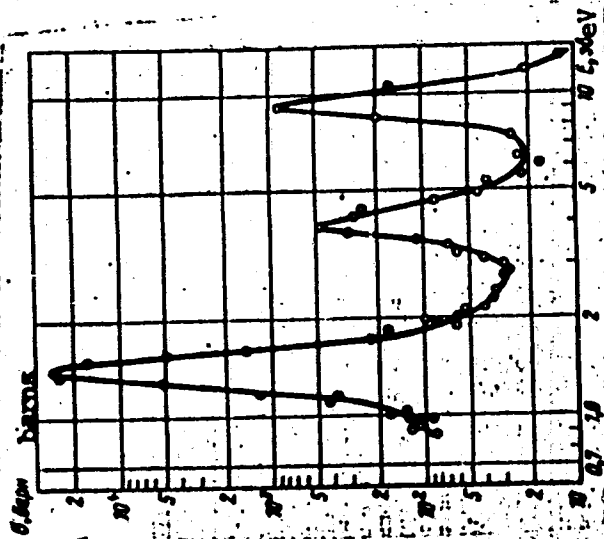
NR REF SOV: 004

OTHER: 000

Card 2/4

ACCESSION NR: AP4041452

ENCLOSURE: 01

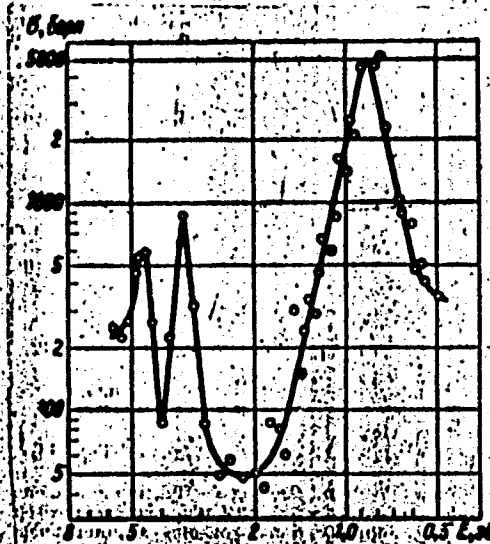


Total neutron cross
section of In^{115}

Card 3/4

ACCESSION NR: AP-041452

ENCLOSURE: 02



Total neutron cross section
of Sm^{149}

Card 4/4

ACCESSION NR: AP4031182

S/0056/64/046/004/1486/1488

AUTHOR: Begzhanov, R. B.; Islamov, A. A.

TITLE: Resonance scattering of Gamma quanta by Ce-140 nuclei

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 4, 1964, 1486-1488

TOPIC TAGS: cerium 140, lanthanum 140, lanthanum 140 decay, resonant scattering, gamma quantum scattering, quadrupole transition, excited state lifetime

ABSTRACT: Resonant scattering of 1597-keV γ quanta emitted by Ce^{140} nuclei resulting from the decay of La^{140} was investigated by an experimental procedure analogous to that used by the authors earlier (ZhETF v. 44, 137, 1963). The self-absorption method was used to determine the lifetime of the excited state. The width of the 1597-keV level was found to be $(3.07 \pm 1.14) \times 10^{-3}$ eV, corresponding to a lifetime of $(2.15 \pm 0.80) \times 10^{-13}$ sec for the lifetime of the 1597-keV excited state of Ce^{140} . The value of the lifetime agrees well with data on Coulomb excitation. Since calculations by the Weisskopf-Moszkowski formula give a lifetime of 17.8×10^{-13} sec, the 1597-keV quadrupole E2 transition in the Ce^{140} is accelerated by a factor of 8, indicating the collective nature of the excitation. Original article has: 2 figures.

Card

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ACCESSION NR: AP4031182

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR (Institute of Nuclear Physics, Academy of Sciences Uzbek SSR)

SUBMITTED: 09Oct63

DATE ACQ: 07May64

ENCL: 02

SUB CODE: NP

NR REF SOV: 003

OTHER: 001

Card 2/4

ACCESSION NR: AP4031182

ENCLOSURE: 01

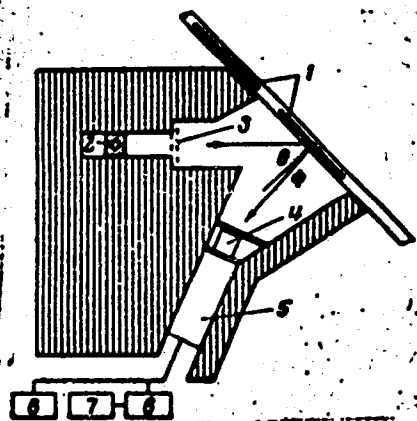
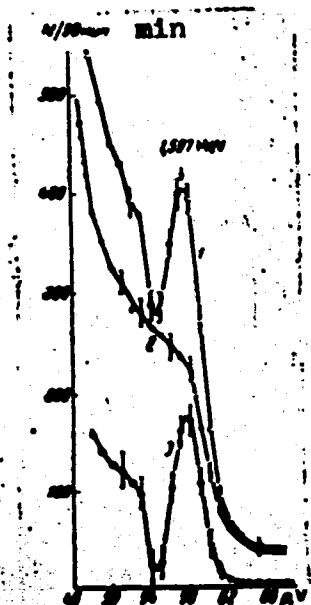


Diagram of experimental setup. 1 - scatterers on moving slides, 2 - source in aluminum can, 3 - position of absorber (in experiment with self-absorption), 4 - NaI(Tl) crystal, 5 - photomultiplier, 6 - single-channel pulse analyzer, 7 - counting unit, 8 - 100-channel pulse analyzer (AI-100)

Card 3/4

ACCESSION NR: AP4031182

ENCLOSURE: 02

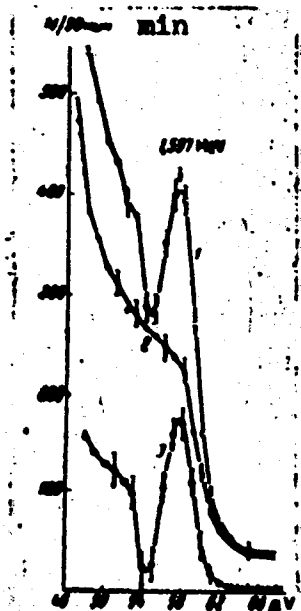


Resonance scattering of γ quanta on Ce^{140} nuclei: 1 - spectrum of scattered radiation from CeO_2 scatterer, 2 - spectrum of radiation scattered from BaO , 3 - difference between 1 and 2

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ACCESSION NR: AP4031182

ENCLOSURE: 02



Resonance scattering of γ quanta on Ce^{140} nuclei: 1 - spectrum of scattered radiation from CeO_2 scatterer, 2 - spectrum of radiation scattered from BaO , 3 - difference between 1 and 2

Card 4/4

ACCESSION NR: AP4042362

S/0056/64/047/001/0016/0020

AUTHORS: Shubnyy, Yu. K.; Kaipov, D. K.; Begzhanov, R. B.

TITLE: Resonance scattering of gamma quanta by the nuclei As-75, Sb-123, and Re-187

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 1, 1964, 16-20

TOPIC TAGS: arsenic, antimony, rhenium, radioactive isotope, excited state, emission linewidth, gamma scattering, resonance scattering

ABSTRACT: The nuclear scattering method was used to determine the lifetimes of the excited states of As⁷⁵, Sb¹²³, and Re¹⁸⁷ with energies 0.265, 0.161, and 0.686 MeV, respectively. The sources were the radioactive isotopes Ge⁷⁵, Sn¹²³, and W¹⁸⁷. The use of solid sources for some measurements made the time between collisions of the recoil nuclei with the surrounding atoms much shorter than the life-

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ACCESSION NR: AP4042362

time of the excited states, and the emission line shape was determined principally by the thermal motion of the radiating nuclei. The method of obtaining the radioactive isotopes is described together with the experimental setup. The values obtained for the lifetimes of As^{75} , Sb^{123} and Re^{187} were $(1.7 \pm 0.3) \times 10^{-11}$, $(8.9 \pm 3.0) \times 10^{-10}$, and $(4.1 \pm 2.0) \times 10^{-10}$, respectively, the latter value being about one order of magnitude larger than that calculated by the Nilsson model, but is close to the result obtained by Vartapetyan by the method of delayed coincidences (ZhETF v. 41, 1710, 1961). Orig. art. has: 3 figures and 2 formulas.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics, Academy of Sciences, Kazakh SSR); Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR (Institute of Nuclear Physics, Academy of Sciences, Uzbek SSR)

SUBMITTED: 21Dec63

ENCL: 01

SUB CODE: NP

NR REF SOV: 002

OTHER: 007

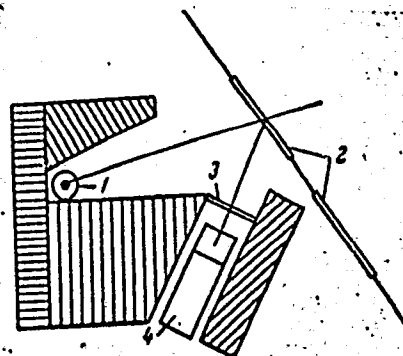
Cord 2/3

ACCESSION NR: AP4042362

ENCLOSURE: 01

Diagram of experimental set-up:

- 1 - electric oven with source
(Ge^{75} or W^{187})
- 2 - scatterers
- 3 - lead or copper absorber (Sn^{125})
- 4 - FEU-12B photomultiplier with
NaI(Tl) crystal



Card 3/3

+ WRITE BELOW THIS LINE +

ABSTRACT

ACCESSION NR: AP4043657

S/0056/64/047/002/0768/0770

AUTHORS: Begzhanov, R. B.; Islamov, A. A.

TITLE: Resonance scattering of gamma quanta by Sr-88 nuclei

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 768-770

TOPIC TAGS: excited state, half life, strontium, gamma scattering, resonance scattering, radiation spectrum, even even nucleus

ABSTRACT: A self-absorption method (F. R. Metzger, Phys. Rev. v. 110, 123, 1958) was used to determine the true value of the lifetime of the excited state of Sr^{88} produced by resonant scattering of gamma quanta using a target in the form RbNO_3 . The incident neutron flux was 1.8×10^{13} neutron-cm⁻² sec⁻¹ from the VVR-S reactor of IYAF AN UzSSR. The experimental geometry was described earlier (ZhETF, v. 44, 137, 1963). The resonance effect was determined by analyzing the spectrum of scattered radiation, registered by a 100-channel

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51"
ACCESSION NR: AP4043657

pulse-height analyzer. The value obtained for the lifetime was $1.10 \pm 0.22 \times 10^{-13}$ sec for the 1.85 MeV level of Sr^{88} . Using the unified model, this result permits interpretation of the first excited state of the even-even nucleus Sr^{88} as being the result of quadrupole vibrations of the nuclear surface about its equilibrium spherical shape. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR
(Institute of Nuclear Physics, Academy of Sciences, Uzbek SSR)

SUBMITTED: 28Feb64

ENCL: 00

SUB CODE: NP

NR REF SOV: 002

OTHER: 004

Card 2/2

3 15309-65 EWT(m) DIAAP
ACCESSION NR: AP4044795

S/0166/64/000/003/0071/0072

AUTHOR: Begzhanov, R. B., Rakovitskiy, S. Ya.

TITLE: The parameter of nonaxiality of deformed doubly even nuclei

SOURCE: AN USSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 3, 1984, 71-72

TOPIC TAGS: nonaxiality, deformed nucleus, doubly even nucleus, nonaxial nucleus, excitation state, nonaxial displacement

ABSTRACT: The authors report the preliminary results of experiments designed to determine the relationship between the energy of the first excitation state $E_1(2)$, the mass number A , and the parameter γ_0 which measures the degree of nonaxiality of a doubly even nucleus. These results confirmed those previously obtained showing that there is a linear relationship between these three variables in the region where $\gamma_0 < 24^\circ$. The study dealt with doubly even deformed nuclei in the range $A = 24-254$ atomic mass units.

Card 1/4

ACCESSION NR: AP4044795

ASSOCIATION: Institute of Nuclear Physics AN USSR (Institute of Nuclear Physics AN USSR)

SUBMITTED: 1984-03

FNCL: 07

SUBJECT: 01

NUCLEAR PHYSICS

OTHER: 003

AC: 100: 81 NR: 1000000000

ENCLOSURE. 31

continued to
Enclosure 02

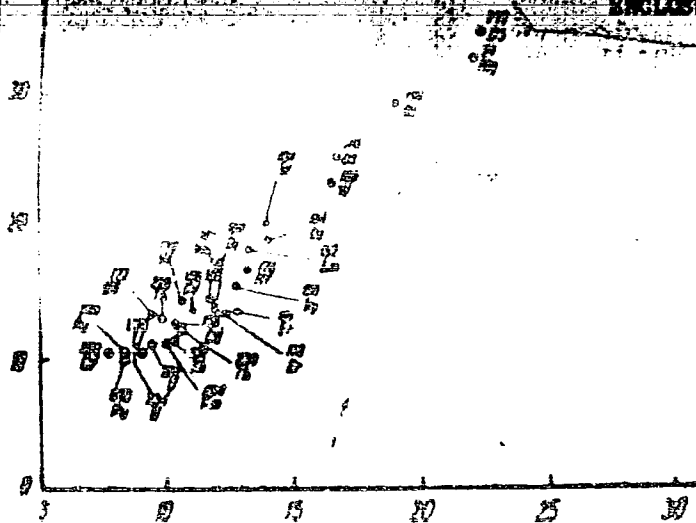
APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000204210004-8"

15302 65
ACCESSION NR: AP4013795

ENCLOSURE: 02

continuation
of Enclosure 01



L 22554-65 EWT(m)/ENP(t)/ENP(b) IJP(c) JD/JO

ACCESSION NR: AP5000467

S/D 166/64/000/004/0032/0036

AUTHOR: Begzhanov, R. B.; Gladyshev, D. A.; Starodubtsev, S. V.; Khaydarov, T. ^B

TITLE: Measurements of the total neutron cross sections of In and Sm

SOURCE: AN UzSSR, Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 4, 1964, 32-36 ^{27 - 27}

TOPIC TAGS: neutron cross section, resonant cross section, indium, samarium, neutron spectrometer

ABSTRACT: Measurements of the total cross sections for neutrons interacting with the In and Sm nuclei were carried out on a neutron spectrometer described earlier (Atomnaya energiya, vol. 14, no. 5, 1963). The width of the channel was 8 μ sec. with a 2.23 μ sec/m resolution for In and 2.5 μ sec/m resolution for Sm. The In target was in the form of a 60 mg/cm² metallic strip of natural isotopic composition and was investigated over the 0.7-14 ev range. Sm was in the form of a chemical compound with 120 mg/cm² of natural samarium. The article contains a detailed description of the experimental data. The results for In and Sm are contained in Figures 1a and 1b of the Enclosure, respectively. The parameters of the resonances are presented in Table

Card 1/2

L 22554-65

ACCLSSION NR: AP5000467

1 of the Enclosure, "Yu. G. Gafurov helped with the measurements." Orig. art. ⁰²
has: 18 formulas, 2 figures and 1 table.

ASSOCIATION: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics, AN
UzSSR)

SUBMITTED: 27Oct63

ENCL: 02

SUB CODE: NP

NO REF SOV: 004

OTHER: 003

Card 2/4

L 58355-65 ENT(1)/EMA(h) Feb
ACCESSION NR: AP5015455

UR/0165/65/000/003/0045/0047

AUTHOR: Begzhanov, R. B.; Galyamov, G. Z.

TITLE: Voltage converter

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 3, 1965, 45-47

TOPIC TAGS: converter, dc to ac conversion, astable multivibrator

ABSTRACT: The described voltage converter circuit is basically a transistor astable multivibrator whose load consists of the split primary winding of a transformer. The 24-v d-c voltage is converted to 127-v 50-cps square waves at the output. The converter capability is 75 v/amp at 81% efficiency. The relatively high power is obtained by connecting three transistors in parallel where one would normally be used. The frequency stability is better than 1%. Since both the input voltage and frequency can change with the input voltage, meters are provided for corrective adjustments. Orig. art. has 1 figure (20)

ASSOCIATION: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics, AN UzSSR)

Cord 1/2

L 58335-65

ACCESSION NR: AP5015455

SUBMITTED: 10Apr64

ENCL: 00

SUB CODE: F

NO REF SOV: 007

OTHER: 000

ATD PRESS: 4046

Card 2/2

BEGZHANOV, R.B.; RAKOVITSKIY, S.L.; STARODUBTSEV, S.V.

E2-transitions from the 3 level of even-even nuclei. Izv.
AN Uz.SSR. Ser. fiz.-mat. nauk 9 no.5:36-48 '65.

(MIRA 18:11)

1. Institut yadernoy fiziki AN UzSSR. Submitted March 2, 1964.

BEGZHANOV, R.B.; GALYAMOV, G.Z.

A voltage converter. Izv. AN Uz.SSR. Ser.fiz.-mat.nauk 9
no.3:45-47 '65. (MIRA 19:1)

1. Institut yadernoy fiziki AN UzSSR. Submitted April 10,
1964.

L 25917-66 EWT(m) DIAAP

SOURCE CODE: UR/0166/65/000/005/0036/0048

ACC NR: AP6016677

AUTHOR: Begzhanov, R. B.; Rakovitskiy, S. L.; Starodubtsev, S. V.

ORG: Institute of Nuclear Physics AN UzSSR (Institut yadernoy fiziki AN UzSSR)

TITLE: E-2 transitions from the 3^+ level of even-even nuclei

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 5, 1965, 36-48

TOPIC TAGS: even even nucleus, nuclear model

ABSTRACT: It is of great importance in the testing and perfection of nuclear models to compare existing experimental data with the predictions of various theories. For instance, the theory of A. S. DAVYDOV and G. F. FILIPPOV (see, e. g., ZhETF /Journal of Experimental and Theoretical Physics/ 35, 440, 1958; 36, 1497, 1959) predicts uniquely (as a function of the nonaxiality parameter) the relative positions of the rotational levels and the relative intensities of the E2-transitions. D. VAN PATTEN (M. Nucl. Phys., 14, 42, 1959) carried out such a comparison for E2-transitions from the two first 2^+ excited levels for a large number of even-even nuclei. The present paper compares, on the basis of 98 references, the position of 3^+ levels and the ratios of the given probabilities of transitions from this level to the lower

Cord 1/2

L 25917-66

ACC NR: AP6016677

2⁺, 4⁺, levels with the predictions of various theories of the nucleus by DAVYDOV and FILIPPOV, BOHR, and MOTTELSON (see, e. g., Atomnaya energiya [Atomic Energy], 1963, No 14, 41), and by V.I. BELYAK, D. A. ZAIKIN, Izv. AN SSSR, seriya fizich. [Bulletin of the AS USSR, Physics Series], 25, 1163, 1961). Such a comparison was partially made earlier by Ye. P. GRIGOR'YEV and M.P. AVOTINA (Izv. AN SSSR, seriya fizich. 24, 324, 1960). Because of the limited amount of data at the time concerning the 3⁺ levels (only nine nuclei) and poor experimental accuracy of the numbers involved, these authors were not able to make pronouncements concerning the merits of the various theories. The present discussion shows that in spite of numerous favorable agreements, many experimental facts are still in disagreement with the above-mentioned nuclear theories. Orig. art. has: 3 figures, 9 formulas, and 1 table. [JPRS]

SUB CODE: 20 / SUBM DATE: 02Mar64 / ORIG REF: 027 / OTH REF: 071

Card 2/2 BLG

ACC NR: AP6024520

SOURCE CODE: UR/0386/66/004/002/0071/0074

AUTHOR: Begzhanov, R. B.; Gladyshev, D. N.; Sadykov, Kh. M.; Tenhabayev, K.ORG: Institute of Nuclear Physics, Academy of Sciences, Uzbek SSR (Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR)TITLE: Lifetimes of the excited levels of Pm^{151}

SOURCE: Zh eksper i teor fiz. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 2, 1966, 71-74

TOPIC TAGS: promethium, nuclear energy level, neutron bombardment, gamma radiation, gamma transition

ABSTRACT: In view of the lack of thorough studies of the Pm^{151} nucleus, the authors present results of a detailed experimental investigation of the lifetimes of the excited levels, using a delayed-coincidence method. The source was obtained by irradiating a natural mixture of Nd isotopes in a thermal-neutron beam from the VVR-S reactor of IYAF AN UzSSR. The integral activity of the interfering components was reduced to 1% of the main effect or less. The lifetime of the 118-kev level was determined from the time coincidence spectrum of 118- and 1180-kev γ rays. An analysis of the pulse-height coincidence spectrum of the 1180-kev γ rays disclosed the presence of additional γ lines which did not agree with the decay scheme. In view of the shortcomings of the published decay scheme, the authors used a new procedure, in which an additional detector was used to obtain $\beta\gamma\gamma$ coincidences. They obtained the

Card 1/2

L 36225-66

ACC NR: AP6024520

pulse-height spectrum of the γ -ray cascade transitions. The lifetimes obtained were 8×10^{-11} and $(0.93 \pm 0.03) \times 10^{-9}$ sec for the 118-kev and 256-kev levels, $\leq 10^{-10}$ sec for the 1298, 1122, 855, and 425 kev levels, and $\leq 2 \times 10^{-10}$ sec for the 176 and 170 kev transitions from the 1298 and 425 kev levels respectively. The new spectrum showed an intense anomalous maximum near 90 kev, belonging apparently to the low-energy levels. Additional facts concerning the hindrance and delay factors of several levels are obtained. Orig. art. has: 1 figure and 4 formulas.

SUB CODE: 20/ SUBM DATE: 12May66/ OTH REF: 004

Card. 2/2. *llb*

ACC NR: AP7013697

SOURCE CODE: UR/0367/67/005/002/0250/0254

AUTHOR: Begzhanov, R. B.; Islamov, A. A.; Starodubtsev, S. V. -- Starodubcev, S. V.

ORG: Nuclear Physics Institute, AN UzSSR (Institut yadernoy fiziki AN UzSSR)

TITLE: Nuclear resonance fluorescence of Sm^{152} ; Nature of the 963 keV (1-) level

SOURCE: Yadernaya fizika, v. 5, no. 2, 1967, 250-254

TOPIC TAGS: resonance scattering, nuclear resonance, Gamma quantum, even even nucleus, samarium, fluorescence

SUB CODE: 20

ABSTRACT: The resonance scattering of γ -quanta is used to investigate the 963 keV 1- level in Sm^{152} . The use of low temperatures (78° K) enhanced the absorption effect and made it possible to determine with good accuracy the life time $\tau = (5.15 \pm 0.50) \times 10^{-14}$ sec of the level by the self-absorption method. An attempt is made to find certain regularities in the behaviour of the nuclear matrix elements and the probabilities of E1 transitions in even-even nuclei. Orig. art. has: 2 figures, 2 formulas and 2 tables. [Based on authors' Eng. Abst.] [JPRS: 40570]

Card 1/1

0833 2122

BEHAL, Frantisek, inz.

Lighting technology, a means for raising the labor productivity and improving work conditions. Podn org 18 no. 3:134-135 Mr '64.

1. Tesla, Holesovice.

BEHAL, Frantisek, inz.

Modernization of lighting in industrial enterprises. Podn org
19 no.4:181-183 Ap '65.

1. Tesla Holesovice, Brno.

CZECHOSLOVAKIA/Chemical Technology-- Chemical Products and Their II.
Application. Food Industry.

Abs Jour : Ref Zhur - Khimiya, No 10, 1959, 36303

Author : Klines, O., Behan, J.

Inst : -

Title : Concerning the Organization of the Milk Industry in GDR.

Orig Pub : Prumysl. Chem., 1958, 9, No 4, 203-212.

Abstract : A report of the trip of Czechoslovak specialists to GDR.

Card 1/1

BEHAN, J.

TECHNOLOGY

periodicals: PRUMYSL POTRAVIN Vol. 9, no. 12, Dec. 1958

BEHAN, J. Technical development and expansion of dairies. p. 622.

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 5
May 1959, Unclass.

BEHAN, Rozsa

T Railroad workers of Kazincbarcika are good savers. Magy vasut
7 no.1:2 1 Ja '63.

VOLAKOVA, Blanka; KOZAK, Pavel; NOVAK, Vlastimil; BEHAREK, Vojtech;
JURECEK, Miroslav

Analytic aspects of the oxidation of organic nitrogenous
substances by chromic acid. Pt. 5. Sbor VSChT Pardubice
no.1:75-88 '63.

1. Chair of Analytical Chemistry, Higher School of Chemi-
cal Technology, Pardubice.

KURTOVIC, Dervis; KARAVANIC, Josip, inz.; BARCAL, Laslo, inz.;
BEHLILOVIC, Fehim, inz.; RADOSEVIC, Nikola

Discussion on submitted reports and communications. Geod
list 17 no. 4/6: 149-155 Ap-Je '63.

BEHILOVIC, Salem; PAMIC, Jakob

Ladinian volcanogenetic series in the Drezanka River Valley,
Hercegovina. Geol glas BiH 7:39-44 '63.

BEHNKE, S.

"Cultivation of Potatoes", P. 47, (NOWE ROLNICTWO, Vol. 3, No. 6, June 1954, Warszawa, Poland).

SO: Monthly List of East European Accessions, (EPAL), LC, Vol. 4, No. 5, May 1955, Uncl.

BEHNKE, S.

✓ Influence of period and depth of sowing on the growth, quality and
yield of potatoes under various methods of cultivation. M. Birecki,
S. Behnke and J. Szulc (*Roczn. Nauk rol.*, 1955, 70, A, 351—404).—
Cultivation practices, e.g., sowing in ridges and on the flat, depth of
planting, deep and shallow inter-cultivation are compared in light,
heavy and peaty soil types. Production of starch in the tubers was
favoured by ridging in light soils and by flat-planting in heavy soils
and, in general, by fairly deep planting (10—15 cm.). Highest
yields of tubers and of starch per acre were obtained by early sowing
followed by ridging three times after the emergence of the plants.
A. G. POLLARD.

②

BIRECKI, Mieczyslaw; BEHNKE, Sabina

The influence of various methods of storing potatoes in ground storage on the value of seed potatoes. Rocznik roln 80 no.4; 699-721 '60. (E&A 9:11)

1. Zaklad Ziemniaka Instytutu Uprawy, Nawozenia i Gleboznawstwa. (Poland--Potatoes)

BEHOUNEK, F., prof., RNDr.

Geneva conference of the United Nations Scientific Committee on
the Effect of Atomic Radiation, 1957. Jaderna energie 3 no.6:187-
188 Je '57.

1. Fakulta technicka a jaderne fyziky Karlovy university;
Ustav jaderne fyziky, dozimetricke oddeleni, Ckoslovenska akademie
ved.

Z/011/62/019/004/001/008
E073/E335

AUTHOR: Běhounek, F.

TITLE: World development in the utilization of radioisotopes
in water and in engineering

PERIODICAL: Chemie a chemická technologie; Přehled technické
a hospodářské literatury, v.19, no. 4, 1962, 155.
abstract Ch 62-2116 (Symposium of the First All-State
Conference on Nuclear Engineering, January 28-30, 1959,
Part I, 40-51)

TEXT: The application of radioisotopes is subdivided into
three groups: very intensive sources of radiation, sources of
low-dose radiation and trace quantities of radioisotopes.
Intensive sources are used in food sterilization, in the manu-
facture of high molecular substances, in the manufacture of
cobalt bombs, in polymerization phenomena and vulcanization of
rubber, etc. Weak sources can be used in diagnosis and therapy,
in industry, in biology, etc. The third group is of interest
primarily in biochemistry (synthesis of albumens and of nucleic
acids) and physiology. Results of further development and
Card 1/2 ✓

BEHOUNEK, FRANTISEK

Lide a radioaktivita. Praha, Naklad-vi Ceskoslovenske Akademie Ved, 1960.
118 p. illus., diagrs., (Nove obzory vedy, Vedeckopopularni edice CSAV, 7)
Bibliography: p. [114]

3
ITP(c)

19
Sensitive detector for γ -background and surface β -contamination. Prentice, Břehounek and Jiri Koci (Czech. Acad. Sci., Prague). *Jaderná energie* 6, 370-82 (1960).— By using commercially available components, a simple, cheap, light, sensitive, accurate, portable, pointer-type detector was constructed. The sensitivity of a com. transistorized $\beta + \gamma$ radiation meter was increased 14 X by replacing its single Geiger tube by 6 of a different type connected in parallel; also, provision was made for keeping the app. cool when working in sunlight, and the time const. was increased for easier reading. The app. was calibrated with Ra^{226} standards at various angles, to correct for directional asymmetry. The natural background of the terrain was obtained by subtracting the known component due to cosmic rays and the background of the app. itself, as detd. by measurement in a rubber boat in a swimming pool. The results were reproducible from day to day. The app. was also used for measuring surface β -activity, by using as a standard a Ti^{44} soln. soaked into a filter paper. The app. can be used for checking the territory surrounding a nuclear reactor for an increase in natural background, for personnel radiation-protection dosimetry, etc. For field use, the s. i. is provided with a Ra standard. H. Newcombe

BEHOUNEK, Frantisek

The problem of radioactive waste disposal in the world. Jaderna energie 6 no.2:53-61 F '60.

1. Fakulta technické a jaderné fyziky, České vysoké učení technické, Praha.

BEHOUNEK, Frantisek; ZELENKOVA, Vlasta

Determining the radioactivity of Beta radioactive liquid wastes.
Jaderna energie 6 no.9:299-302 S '60.

1. Fakulta technicke a jaderne fyziky, Ceske vysoke uceni
technicke (for Behounek) 2. Dosimetricke oddeleni, Ustav
jaderneho vyzkumu, Ceskoslovenska akademie ved (for Zelenkova)

BEHOUNEK, Frantisek; KOCI, Jiri

A sensitive detector of the gamma background and the beta surface contamination. Jaderna energie 6 no.11:379-382 N '60.

1. Fakulta technicka a jaderne fyziky, Ceske vysoke uceni technicke (for Behounek). 2. Dosimetricke oddeleni, Ustav jaderneho vyzkumu, Ceskoslovenska akademie ved (for Koci).

21-7200

28263

Z/038/61/000/012/001/003
D291/D301

AUTHOR: Běhounek, Frantisek

TITLE: The environmental effect of nuclear installations

PERIODICAL: Jaderná energie, ¹no. 12, 1961, 397-400

TEXT: The author describes the type of terrain best suited for constructing nuclear installations from the viewpoint of protecting the population from direct radiation and radiation of nuclear waste. Since sites with ideal environmental conditions are very rare, necessary precautions must be taken in the vicinity of reactors by constant measurement of the amount of radioactivity in the air. Observations of the environment, air, water and soil by French, British and American nuclear installations are described in some detail. Research results on the effects of radioactivity upon human genes in Great Britain are briefly mentioned. The author concludes that a systematic

Card 1/3

20263

Z/038/61/000/012/001/003
D291/D301

The environmental effect ...

measurement of the radioactivity of aerosols in the surrounding air as well as frequent periodic controls of gamma radiation of the soil are the cheapest, most effective and simplest preventive radiation dosimetry in the vicinity of nuclear reactors. The measurement of aerosols is disadvantageous, since results are not known for 2 to 3 weeks, the time required to process the filters. A systematic observation of gamma radiation of the soil yields immediate results and can also be easily and cheaply registered e.g. by simple adjustment of the device, described by Běhounek and Koří (Ref. 4: Jaderná energie 6 (1960) no. 11, p. 379). After a thorough exploration of the terrain, devices of this type can also be permanently installed at sites, whence they will convey timely information on the activity of aerial wastes escaping through the reactor funnel. There are 20 references: 2 Soviet-bloc and 18 non-Soviet bloc. The references to the 4 most recent English language

Card 2/3

28263

The environmental effect ...

Z/038/61/000/012/001/003
D291/D301

publications read as follows: P.F. Gustafson: Assessment of the Radiation Dose due to Fallout. Radiology 75 (1960) p. 282; V.B. Harris: Examining the Value of Reactor Site Environmental Surveys, A United States View. Nucl. 18, (1960) p. 66; H.J. Dunster: Examining the Value of Reactor Site Environmental Surveys, A United Kingdom View. Nucl. 18 (1960), p. 67; Nucl. Engine 6 (1961), p.55

ASSOCIATION: Fakulta technické a jaderné fyziky ČVUT (Faculty of Technical and Nuclear Physics ČVUT)

Card 3/3

BEHOUNEK, Frantisek, akademik; HERCIK, Ferdinand

Scientific Committee of U.N.O. for Study of the Effects of
Nuclear Radiation. Vestnik CSAV 70 no.5:711-715 '61.

1. Clen korrespondent Ceskoslovenske akademie ved (for Hercik).

Z/038/62/000/006/003/004
D409/D301

AUTHOR: Běhounek, František

TITLE: Detection of very low specific activities in solutions

PERIODICAL: Jaderná energie, no. 6, 1962, 189 - 193

TEXT: Evaluating papers published in previous issues of this journal and in foreign literature, the author analyzes methods of measuring very low radioactivities in solutions (waste water). The most common method is the so-called evaporation method where a beta-contaminated solution is evaporated and the activity of the residue determined with an end-window GM counter. The evaporation method and its numerous varieties are cheap, however, tedious and subject to several errors, and can be applied only to detect the total beta radiation without discrimination between individual isotopes. A certain discrimination between individual beta radiators is possible by the differential absorption measuring suggested by F. Běhounek and V. Zelenková (Ref. 7: Stanovení radioaktivity beta kapalných odpadů (Determination of the beta radioactivity in waste liquids) Jaderná energie 6 (1960, no. 9, p. 299); however, contents of dangerous Sr-Card 1/2 ✓

Detection of very low specific ...

Z/C38/62/000/006/003/004
D409/D301

90 must still be determined by conventional analytical or radiochemical methods. An improved evaporation method, suggested by W. Ducek (Ref. 10: Atompraxis 3 (1957), p. 405), allows one to detect $5 \cdot 10^{-9}$ uc/ml. A scintillation-cuvette dosimeter, described by J. Rálková and J. Slunečko (Ref. 4: Měření nízkých aktivit ve vodách II. Konstrukce kyvetového počítáče (Measuring of low activities in water II. The design of a cuvette counter), Jaderná energie 6 (1960) no. 7, p. 235); and (Ref. 5: Jaderná energie 7 (1961), no. 1, p. 13) has a sensitivity of $4 \cdot 10^{-8}$ uc/ml and partially eliminates the disadvantages of the evaporation method. However, this instrument is rather expensive and its use is only justified in cases where Sr-89 + 90 has to be determined. In addition, the dosimetric calibration of this instrument, performed by J. Rálková, is very inaccurate and erroneous conclusions were made which are strongly criticized by the author. In conclusion, the article lists two methods of alpha dosimetry, commonly used in Western countries.

ASSOCIATION: Fakulta technické a jaderné fyziky ČVUT (Technical and Nuclear Physics Department, Czechoslovak Institute of Technology)

Card 2/2

BEHOUNEK, Frantisek; BARTA, Karel; FISER, Bohuslav

Fast checking of liquid waste beta activity. Jaderna energie
9 no.6:181-184 Je '63.

1. Fakulta technicke a jaderne fyziky, Ceske vysoke uceni
technicke a Radiologicka dozimetrie, Ustav jaderne fyziky,
Ceskoslovenska akademie ved.

BEHOUNEK, F.

Commemorating the 60th birthday of Vladimir Majer. Chem
listy 57 no. 5: 556-557 My '63.

BEHOUNEK, Frantisek; GAKKEL', Ya.Ya., red.

[Tragedy in the Arctic Ocean. Translated from the Czech]
Tragediia v ledovitom okeane. Posleslovie Miroslava
Gamusha. Moskva, Izd-vo inostr. lit-ry, 1962. 295 p.
(MIRA 1714)

L 20590-66 BWT(m) DIAAF

ACC NR: AP6012006

SOURCE CODE: CZ/0038/65/000/012/0441/0447

AUTHOR: Behounek, Frantisek--Begounek, F.; Motouskova, Jirina--Matoushkova, Y.
ORG: Behounek Department of Technical and Nuclear Physics, CVUT, Prague;

TITLE: Analysis of induced atmospheric radioactivity

SOURCE: JADERNA energie, no. 12, 1965, 441-447

TOPIC TAGS: atmospheric radioactivity, nuclear weapon burst, radioactive fallout

ABSTRACT: The radioactivity arising in the atmosphere after nuclear weapon tests is of complex nature and may be divided into a short-lived component containing nuclides with $T \leq 1$ year, and into a long-lived component formed essentially from two nuclides (^{90}Sr and ^{137}Cs) with the half lives of 28 and 30 years, respectively. The short-lived component forms the main part of total activity of atmospheric fall-out for several years and is decisive in increased radiation background for populations. The long-lived component is important in the food chain and its quantitative evaluation is difficult. On the basis of long-term analyses criteria for precise evaluation of atmospheric fallout activity are discussed. Orig. art. has: 3 figures and 3 tables. [NA]

SUB CODE: 18, 04 / SUBM DATE: none / ORIG REF: 012 / OTH REF: 013

Card 1/1 BK

UDC: 661.039.766: 614.73: 623.45

L 35263-66

ACC NR: AP6024696

SOURCE CODE: CZ/0038/65/000/012/0441/0447

AUTHOR: Behounek, Frantisek--Bogounek, F. (Academician);
Matouskova, Jirina--Matoushkova, Y. 41

ORG: [Behounek] Faculty of Technical and Nuclear Physics, CVUT (Fakulta technicka a
jaderne fyziky); [Matouskova] Radiological Dosimetry, Nuclear Research Institute,
CSAV (Radiologicka dozimetrie Ustavu jaderneho vyskumu CSAV) 6

TITLE: Analysis of induced atmospheric radioactivity 19

SOURCE: Jaderna energie, no. 12, 1965, 441-447

TOPIC TAGS: atmospheric radioactivity, radioactivity measurement, radioactive fallout, radiation effect

ABSTRACT: The induced radioactivity arising in the atmosphere after nuclear weapon tests may be divided into short-lived and long-lived components. The short-lived component forms the main part of total activity of atmospheric fallout for several years and is decisive for the increase of radiation background for the population. The long-lived components manifests itself practically only in the food chain and its correct quantitative evaluation is difficult. The article discusses the criteria for precise evaluation of atmospheric fallout activity on the basis of long-term analyses. Orig. art. has: 3 figures and 3 tables. [Based on author's Eng. abstr.] JPRS: 34,666

SUB CODE: 18 / SUBM DATE: none / ORIG REF: 011 / OTH REF: 014
 DEC: 661.039.566 614.73 623.45

БЕНОУНЕК, Р.

1. The Geography and Location of the Organization of Interest for the purpose of the investigation of the "Red" and "Black" (not listed) in the U.S.
2. The Organization of the "Red" and "Black" (not listed) by the "Red" and "Black" (not listed) in the U.S.
3. The Organization of the "Red" and "Black" (not listed) in the U.S. (not listed) in the U.S.
4. The Organization of the "Red" and "Black" (not listed) in the U.S. (not listed) in the U.S.
5. The Organization of the "Red" and "Black" (not listed) in the U.S. (not listed) in the U.S.
6. The Organization of the "Red" and "Black" (not listed) in the U.S. (not listed) in the U.S.
7. The Organization of the "Red" and "Black" (not listed) in the U.S. (not listed) in the U.S.
8. The Organization of the "Red" and "Black" (not listed) in the U.S. (not listed) in the U.S.
9. The Organization of the "Red" and "Black" (not listed) in the U.S. (not listed) in the U.S.

BEHOUNEK

BOUSHKA, Yan [Bouska, Jan]; KOCHI, Alois [Koci, A.], kand. fiz-mat. nauk, inzh.;
 MRAZEK, Irzhi [Mrázek, Jiri]; SHUBRT, Jaroslav
 [Subrt, Jaroslav]; RUPREKHTOVA, Libushe [Ruprechtova,
 Libuse], inzh., retsenzent; KRZHIVSKI, Ladislav
 [Krivsky, Ladislav], retsenzent; BEGOUNEK, Rudolf
[Behounek, Rudolf], prof., nauchnyy red.; TRZHISKOVA,
 Lyudmila [Triskova, Ludmila], inzh., nauchnyy red.

[Results of geomagnetic, telluric, and ionospheric observa-
 tions conducted at the observatories of Pruhonice, Budkov,
 and Panska Ves in 1959] Rezul'taty geomagnitnykh, telluri-
 cheskikh i ionosfernykh izmerenii, provedennykh v observa-
 toriiakh Prugonitse, Budkov i Panska Ves v techenie 1959
 goda. Prague, Izd-vo Chekhoslovatskoi Akad. nauk, 1962.
 742 p. (MIRA 16:7)

1. Nachal'nik kollektiva Geomagnitnoy observatorii Prugonitse
 [Pruhonice] u Pragi (for Kochi). 2. Nachal'nik ionosfernogo
 otdela Geomagnitnoy observatorii Prugonitse [Pruhonice] u
 Pragi (for Mrázek).

(Czechoslovakia--Geophysics--Observations)

MARSALEK, E.; MALOTA, H.; BEHOUMKOVA, I.

Treatment of bronchial asthma with complete microbial antigens.
Cas.lek.cesk.99 no.48:1514-1519 25 N '60.

1. Ustav lekárske mikrobiologie, prednosta doc. dr. E.Marsalek,
alergologické stred. II. interní kliniky PU v Olomouci prednosta
doc.dr. Z.Kojecky.
(ASTHMA ther)
(ANTIGENS ther)

L 32997-66 T JK
ACC NR: AP6024088

SOURCE CODE: CZ/0082/66/000/001/0042/0047

AUTHOR: Kolar, O.; Behounkova, L.; Klobusicka, M.; Kotrle, M. 37

ORG: Neurological Clinic/headed by Professor, Doctor J. Hrbek, Doctor of sciences/, Medical Faculty, PU, Olomouc (Neurologicka klinika lekarske fakulty PU); Microbiological Institute/headed by Docent, Doctor E. Marsalek/, Medical Faculty, PU, Olomouc (Mikrobiologicky ustav lekarske fakulty PU); Department of Experimental Cytology, SAV/headed by Academician I. Stanek/, Bratislava (Oddeleni experimentalni cytologie SAV); Histological and Embryological Institute, Medical Faculty, PU/headed by Docent, Doctor M. Obrucnik, Candidate of sciences/, Olomouc (Histologicky a embryologicky ustav lekarske fakulty PU); [Kolar] Faculty Hospital, Olomouc (Fakultni nemocnice)

TITLE: Problem of immunological reactions connected with mononuclear cells in the cerebrospinal fluid in the course of subacute encephalitis Dawson-Pette-Doring-van Bogaert [This paper was presented at the 8th Pediatric Neurology Days held in Stary Smokovec in 1964 as well as at the Biological Days held in Prague in 1964.]

SOURCE: Ceskoslovenska neurologie, no. 1, 1966, 42-47

TOPIC TAGS: immunology, central nervous system, encephalitis, experiment animal, antigen, cell physiology, neurology

ABSTRACT: An attempt was made to transfer late hypersensitivity from 12 patients to guinea pigs. The antigen used was an extract from the brain tissue of a deceased patient who suffered from subacute Dawson-Pette-Dorig-van Bogaert encephalitis. A positive reaction to cerebrospinal fluid of patients was found in 50% of the guinea-pigs. Late

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ACC NR: AP6024088

hypersensitivity was transferred only in 1 of 22 cases. Experiments with tissue cultures from fetal brain indicated that in addition to mononuclear cells originating from blood elements and leptomeningeal structures, elements originating in brain or spinal cord tissue should be expected in the cerebrospinal pathways in subacute cases of the discussed encephalitis. Immunological function of fluid mononuclear cells in transferring late hypersensitivity by the cerebrospinal fluid are discussed. [Based on authors' Eng. abst.] [JPRS]

SUB CODE: 06 / SUBM DATE: 20Jul64 / ORIG REF: 008 / SOV REF: 002
OTH REF: 010

Card 2/2 20

MALOTA, H.; BEHOUNKOVA, L.; MARSALEK, E., technicka spoluprace CAPKOVA, A.

Participation of various microbial species in the development of
bronchial asthma of infectious allergic origin. Cas.lek.cesk 100 no.43:
1363-1366 27 0 '61.

1. Alergologicke stred. II interni kliniky PU v Olomouci, prednosta
doc. dr. Z. Kojcky. Ustav lekarsky mikrobiologie, prednosta doc. dr.
E. Marsalek.

(ASTHMA microbiol)

BEHOUNKOVA, L.; CERNA, I.; LEPKOVA, V.; MARSALEK, E.; ZIZKA, Z.

Presence of Candida on the mucous membrane of the respiratory tract. Cesk. epidem. 13 no.3:159-164 My'64

1. Ustav lekárske mikrobiologie lekárske fakulty PU
[Palackého university], Olomouc.

BEHOUNKOVA, Lidia; SIMCEK, Cyril

Passive sensitization of the tuberculin type in pulmonary tuberculosis and sarcoidosis. Med. dosw. mikrobiol. 16 no.1:55-60 '64.

1. Z Zakladu Mikrobiologii Lekarskiej (Kierownik: doc. dr E. Marsalek) i z Kliniki Gruzliczej (Kierownik: doc. dr V. Riha) Wydzialu Lekarskiego Uniwersytetu im. Palackiego w Olomuncu.

KOLAR, O.; BEHOUNKOVA, L.; KLOBUSICKA, M.; KOTRLE, M.

The problem of immunological reactions connected with mononuclear cells in the cerebrospinal fluid in the course of subacute encephalitis Dawson-Pette-Doring-van Bogaert. Cesk. neurol. 29 no.1:42-47 Ja '66.

CA

BEHR, Barbara

Movements of the dropping mercury electrode and of the electrolyte in the oscillographic measurements. Wiktor Kemula and Barbara Behr (Univ. Warsaw, Poland). *Rozprawy Chem.* 29, 223-34 (1931).—The dropping-Hg electrode was polarized by a periodically changing current. Over a large range of frequencies the dropping of Hg was irregular and the drops pulsed strongly. At low frequencies the pulsations were synchronized with the voltage changes of the polarizing current. The lifetime of the Hg drop depended on the frequency of the applied voltage, showing discontinuities at some frequencies. By adding small charcoal to the solution, appreciable stirring of the electrolyte near the electrode was observed. Thus the theory of polarography cannot be used as a basis of oscillographic measurements. A new theory is needed. I. Z. R.

BEHR, Barbara

Chemical Abst.
Vol. 48
Apr. 10, 1954
Electrochemistry

3 10
Influence of oxygen on the oscillographic curves.
Barbara Behr and Jerzy Chodkowiak (Univ., Warsaw, Poland). *Kosmiki Chem.* 26, 681-82 (1952) (English summary).—The influence of O on the oscillographic curves $v = f(t)$ was investigated by using a Heyrovsky apparatus as modified by Kemula and Behr (C.A. 47, 7344) with 16 cycles per sec. for the polarizing voltage. The expts. showed that the oscillographic reduction of O proceeded just like the polarographic one: $O_2 + 2 HOH + 2e^- \rightarrow H_2O_2 + 2 OH^-$; $H_2O_2 + 2 HOH + 2e^- \rightarrow 2 H_2O + 2 OH^-$. The reduction of O in solns. open to air did not produce any steps on the oscillographic curves. Reduction must be interpreted by inference, i.e. the H wave did not appear when O was present in dilute HCl solution. This so-called latent limiting current was due to the neutralizing action of the OH^- which arose during the reduction of O. If O was present in higher concns. 2 steps were noted on the cathodic branch of the oscillographic curve and one step on the anodic branch. The anodic step and the second cathodic step disappeared when the soln. was acidified or buffered. In neutral unbuffered solns. of Cd^{++} , Zn^{++} , and Pb^{++} , the influence of O on the oscillographic curves was observed by the presence of the second cathodic step, which disappeared when H was bubbled through the soln. For Pb^{++} in KI, the anodic branch also had 2 steps. Supplementary steps disappeared (1) after air was removed from the soln., (2) after the soln. was acidified, and (3) if NH_4Cl or if KOH were used as indifferent (supporting) electrolytes. When the second cathodic step was present, the latent limiting current was observed polarographically. It was caused by the production of sparingly sol. hydroxides of the cations, production of which was due to the OH^- from the O reduction. Under the conditions (1)–(3) these hydroxides could not be formed, as was also the case if a complex former like KI was present. The work is being continued. W. J.

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ОЕНК. САРБАКА

APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000204210004-8"

BFHR, B.

A general meeting of the Polish Chemical Society. p. 279.

SO: Monthly List of East European Accessions (FEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

THE DEGREE OF...
that of the Pb/Mg... Pb... 2... reaction... Thus, the
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The damping of polarographic diffusion currents by metal hydroxides which form during the electrode reactions. H. Behr and J. Chodkowski (Polish Acad. Sci., Warsaw). *Z. physikal. Chem. Sonderheft* 1938, 119-33; cf. C.A. 52, 18023g; Kemula and Rakowska, C.A. 53, 4970d.—Measurements of the capacity of the elec. double layer, as well as analyses of the polarographic curves of current on a single Hg drop enabled a description of the conditions under which slightly-sol. metal hydroxides, which are formed at the electrode, are adsorbed and thereby damp the limiting current. The polarographic behaviors of the ions, Pb^{++} , Tl^+ , Cd^{++} were examd., with special attention being given to the latter. H. K. Zimmerman.

99

POLAND/Physical Chemistry. Electrochemistry.

Abs Jour: Ref Zhur-Khim., No 1, 1959, 582.

Author : Dehr D., Chodkowski J.

Inst : _____

Title : The Suppression of Polarographic Diffusion Currents by
Metal Hydroxides Formed As the Result of Electrode
Reactions.

Orig Pub: Roczn. chem., 1958, 32, No 2, 339-352.

Abstract: To establish the conditions for suppressing (S)
the maximum current, i , (lim.) O_2 in the presence
of certain depolarizators, a study was conducted
on polarographic and oscillographic (i , t) curves
of corresponding solutions as well as on the curves
representing the relationship between differential
capacity C of a double layer and the electrode po-

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POLAND/Physical Chemistry. Electrochemistry.

D

Abs Jour: Ref Zhur-Khim., No 1, 1959, 582.

tential E. The S of i (lim.) O_2 is observed only in the case of a formation of difficultly soluble precipitate of the basic salts (BS) on the electrode surface: Cd in KCl, KNO_3 , $KClO_3$ solutions; Pb in KCl solution; Zn in KNO_3 solution. Acidification eliminates the mentioned phenomenon and gelatine reduces it. As the result of BS adsorption, C is reduced and abnormally large oscillation are observed on polarograms. The phenomenon of S of i (lim.) O_2 disappears after i (lim.) of metal cations has been reached. An increase in a drop-time (t) of the Hg-electrode increases the effect of i (lim.) O_2 . When E is displaced toward the negative side this effect is observed at a later

Card : 2/3

BEHR, Barbara; DOJLIDO, Jadwiga; MALYSZKO, Jan

Study of electrode reaction kinetics by the amalgam polarographic and a.c. compensation method. Pt.1. Roczniki chemii 36 no.4:725-736 '62.

1. Laboratory of Physico-Chemical Analytical Methods, Institute of Physical Chemistry, Polish Academy of Sciences, and Department of Inorganic Chemistry, University, Warsaw.

BEHR, Barbara; CHODKOWSKI, Jerzy, LICHOSIK-ORLIKOWSKA, Agnieszka

Influence of hydroxyl ions produced at the electrode on the polarographic reduction of zinc. Roczniki chemii 36 no.11: 1512-1561 '62.

1. Laboratory of Physicochemical Analytical Methods, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, and Department of Inorganic and Analytical Chemistry, Faculty of Pharmacy, Medical Academy, Warsaw.

POLAND

DOJALDO, Barbara, and LEHR, Barbara, of the Department of Inorganic Chemistry, University; Institute of Physical Chemistry, Polish Academy of Sciences (Katedra Chemii Nieorganicznej, Uniwersytet, Warszawa; Instytut Chemii Fizycznej, Polska Akademia Nauk, Warszawa), in Warsaw.

"Adsorption of Benzene at the Dropping Mercury Electrode in Aqueous and Ethanolic-Aqueous KCl Solutions."

Warsaw, Roczniki Chemii, Vol 37, No 9, 1963, pp 1043-1050.

Abstract: [English article, authors' summary modified] The purpose of this paper is to obtain more detailed quantitative information on the double-layer structure when benzene is present, by measuring the double-layer capacity. Adsorption of benzene from aqueous and water-ethanolic KCl solutions at the dropping mercury electrode was investigated by measuring the differential capacity with the A-C compensation method. Adsorption isotherms were determined, and the heat of adsorption estimated. The solubility of benzene in the solutions under investigation was determined spectrophotometrically. Ten references, including 1 Polish, 2 Russian, 2 German, and 5 Western.

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I 44751-65

ACCESSION NR: AF5015026

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AUTHOR: Behr, H. J.

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B

TITLE: Phyllites from Hermsdorf/Rehefeld and the age of the gneisification in the Erzgebirge (Erz Mountains)

SOURCE: Akademie der Wissenschaften, Berlin. Monatsberichte, v. 6, no. 7, 1964, 530-538

TOPIC TAGS: geology ✓

Abstract: The Eastern section of the Phyllite field in the Hermsdorf/Rehefeld (Erzgebirge) area was investigated with the aim of establishing the formation mechanism of the field and of studying the relations between the gneiss and the phyllite. A geological map of the area was presented. Orig. art. has 5 figures.

ASSOCIATION: Geologisches Institut der Bergakademie, Freiberg (Geology Institute of the Mining Academy)

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NO REF SOV: 000

OTHER: 011

JPRS

Card 1/1

BEHRBOHM, Peter

Some current problems in occupational dermatology in the People's Republic of Germany. Prac. lek. 16 no.9:417-420 N ' 64

1. Německý centrální institut pro pracovní lékařstvo, Berlin-Lichtenberg (vedoucí prof. dr. E. Holstein) a Institut pro choroby z povolání (řídítel prof. dr. H. Thiele).

